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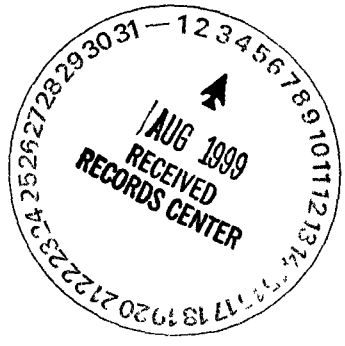
Reconnaissance Level Characterization Report For The T690 Complex Office Trailer Removal

July 1997



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RECONNAISSANCE LEVEL CHARACTERIZATION REPORT FOR THE T690 COMPLEX OFFICE TRAILER REMOVAL

REVISION 0

JULY 1997

This Reconnaissance Level Characterization Report has been reviewed and approved by

Vern Guthrie, Acting Vice President	Date 7/3/97
Mark Hickman, Project Manager	Date 7-2-97
Gary Konwinski, Environmental Manager	Date 7-3-97
Ruth McCafferty, Industrial Hygiene	Date 7/3/97
Juan Hernandez, ESH&Q	Date 7-8-97

This Reconnaissance Level Characterization Report was prepared by:

Mary T. Aycock, Environmental Engineer, SEG, CO	Date 7/3/97

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RECONNAISSANCE LEVEL CHARACTERIZATION REPORT

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ACRONYMS

DQO	Data Quality Objective
EPA	U S Environmental Protection Agency
IWCP	Integrated Work Control Program
OSHA	Occupational Safety and Health Administration
RESI	Reservoirs Environmental Services, Inc
RFETS	Rocky Flats Environmental Technology Site
SOW	Statement of Work

RECONNAISSANCE LEVEL CHARACTERIZATION REPORT

1.0 INTRODUCTION

A Statement of Work (SOW) has been prepared for the removal and disposal of the T690 Office Trailer Complex The removal is necessary due to the change in mission of the Rocky Flats Environmental Technology Site (RFETS) from the production of nuclear components to environmental cleanup and shutdown, in which the T690 Office Trailer Complex has no identified function after Fiscal Year 1997 Accordingly, site management has determined that the T690 Office Trailer Complex must be decommissioned to a safe and stable configuration to reduce operating costs and hazards

The T690 Office Trailer Complex is comprised of 31 single-wide, prefabricated trailers (A-M) located in the south central portion of RFETS in addition, T-371G and T44A will be removed as part of this scope Installation of the trailers commenced in 1963 and continued through 1986 The trailers were installed as single units with the exception of A (16 units), B (five units), and E (two units) All trailers are currently used as office trailers, Trailers J, K, and L also serve as laboratory facilities No Individual Hazardous Substance Site, Areas of Concern, or Under Building Contamination have been identified with respect to the removal of the T690 Complex If necessary, sampling for soil contamination and free property release will be conducted

1.1 PURPOSE

The purpose of this Reconnaissance Level Characterization Report is to present all of the available data and process information related to operations at the T690 Office Trailer Complex, in an effort to characterize the subject facilities Characterization includes identification of the type, quantity, condition, and location of both confirmed and potential sources of radioactive and hazardous materials within the Complex The following facility information incorporates the T690 Office Trailer Complex removal project files established during the reconnaissance characterization, including pertinent data from various sources The report is to serve as a practical reference during removal operations

This information will provide a baseline of information for the hazards within the Complex This baseline will aid the State in determining if a Decommissioning Operations Plan is required for the decommissioning effort

1.2 SCOPE

This report supports the task work defined in the SOW for Building T690 Office Trailer Complex Removal for the U S Department of Energy at the RFETS located near Golden, Colorado, dated May 8, 1997 The information presented in this report specifically defines the removal phase of the T690 Office Trailer Complex and T371G and T444A The review of historical records and collection of process knowledge information encompasses facility operations from initial construction to present activities

The project will proceed in accordance with the SOW as follows

Phase I **Design and Review of Integrated Work Control Package (IWCP)**

Construction management requirements dictate coordination of preliminary design and review activities that must be addressed prior to and during construction Preparation of the IWCP addresses design specification and administrative requirements as established by the subcontract

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Phase II **Preparation of Buildings for Removal**

Preparation includes disconnecting utilities, fire systems, and computer and telephone supply lines Exterior structures including stairs, landings, and roof sections will be removed Pier footings will also be demolished as part of this phase

Phase III **Transportation or Demolition of Buildings**

Activities include transportation or demolition of physical transport of the buildings Trailer A will be demolished, Trailer J will be moved to a location south of Building 891, near Construction Management trailers The remainder of the trailers will be moved offsite and relocated onto an indian reservation south of Colorado Springs

Phase IV **Site Cleanup**

Activities include final gradework and cleanup of the construction site

1.3 METHODOLOGY

As part of this investigation, comprehensive physical inspections of all accessible areas of T690 Office Trailer Complex were conducted during March 1997 The primary purpose of these inspections were

- to confirm the accuracy of file documentation of as-built or modified facility construction equipment installations and general facility conditions,
- obtain volume estimates for wastes that will be generated during removal activities,
- identify equipment, structures, process lines, and associated items that will require hazardous and/or radioactive surveys and analytical sampling to further characterize the complex, and
- identify potential sources of lead and asbestos

1.4 SUMMARY

Based on review of the available information, it was determined that no further sampling or radiation surveys were required prior to completing this Reconnaissance Characterization Report However, additional sampling will be completed as In-process Characterization The quantity and quality of the data already reviewed is adequate to plan the decommissioning activities and provide for protection for the decommissioning work force

An examination of building construction materials and building use relating to the T690 Office Trailers was conducted in May 1996 and is summarized in the referenced reports A follow-up survey was conducted in March 1997 to verify the accuracy of the initial survey, and to determine the need of additional sampling As part of the examination, a comprehensive survey was conducted to determine the location and character of potentially hazardous contaminants present in the building materials A summary of relevant characterization information is presented in Section 2 0 and 3 0 The general conclusions drawn from this examination are presented in Section 5 0

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2.0 ANALYTICAL TESTING

Specific rationale for the Sampling and Analysis was presented in the Reconnaissance Level Characterization Plan for the T690 Complex A brief description of the rationale for sampling and analysis is presented below

2.1 WASTE MANAGEMENT

Materials from removal activities, including demolished pier footings, masonry units, and lumber, will be generated as waste and will be characterized prior to disposition Procedures will be in place to insure that sampling and analysis of generated wastes will be in accordance with the U S Environmental Protection Agency (EPA) and State regulations Hazardous and radioactive contaminant data will be acquired, to a level consistent with regulatory and procedural requirements, for wastes that will be generated as a result of a particular activity The requirements for characterization of hazardous waste is specified in several RFETS waste management procedures, based on requirements established primarily by 40 CFR 261 and 6 CCR 1007-3, 261 Waste materials demonstrating hazardous or radioactive characteristics will be managed in accordance with the Low-Level or Hazardous Waste Requirements Manual

2.2 INDUSTRIAL HYGIENE

Removal activities may involve the generation of hazardous dusts and fumes, and can expose personnel to hazardous materials or constituents (i e , welding of lead paint) The potential for exposure will be evaluated, prior to conducting the operation, according to Occupational Safety and Health Act (OSHA) and National Institute of Occupational Safety and Health requirements This requirement is driven by OSHA 1926 62 for lead and driven by other sections of OSHA for other constituents Data will be acquired for contaminants associated with equipment, building materials, residuals within construction areas, or other potential sources of hazardous exposure to the workers Preliminary screening and sampling in accordance with OSHA requirements is required in decommission areas for materials such as beryllium, lead, cadmium, chrome, asbestos, and other hazardous constituents Trailers designated for offsite transport will be surveyed for radiological contamination in accordance with procedure number 1-P73-HSP-18 10 "Radioactive Material Transfer and Unrestricted Release of Property" The documentation will be included in the project files for IWCP closeout Specific instructions for conducting radiological surveys on both the interior and exterior of each trailer are included as Attachment 6 1 Trailers will be decommissioned according to Engineering and Administrative Controls, Decontamination, or use of Personal Protective Equipment, as implemented under appropriate plans and procedures to meet OSHA requirements

3.0 RECONNAISSANCE SURVEY RESULTS

3.1 ASBESTOS

In May 1996, Gobbell-Hays Partners, Inc performed an asbestos and lead inspection of the Building T690A Trailer Offices at RFETS Results are indicated in Attachment 6 2 The purpose of the survey was to prepare for the demolition and/or removal of the trailers A follow-up survey of all trailers was conducted by Rocky Mountain Remediation Services, L. L C project team members, during March 1997, to verify the initial survey data and identify areas in need of additional sampling All potential Asbestos Containing Materials were reevaluated and sampled according to guidelines established by the Asbestos Hazard Emergency Response Act Samples were submitted to Reservoirs Environmental Services, Inc (RESI) for analysis by Polarized Light Microscopy Small concentrations of asbestos were detected in floor and ceiling tile adhesive samples in Trailer A and floor tile samples from Trailer B Samples from the remaining trailers contained no detectable amounts of asbestos Results are summarized in Attachment 6 3

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3.2 LEAD

Bulk paint samples collected in May 1996 were submitted to RESI for lead analysis utilizing Atomic Absorption Spectroscopy (EPA method SW846-3050A/7420) The samples were collected from interior and exterior surfaces throughout the trailer complex Analysis results indicate that the samples collected from ceiling, door, siding, skirting, wall, and stair surfaces contained low concentrations of lead Bulk asbestos and lead sample analyses results are included as an attachment

3.3 RADIOLOGICAL SURVEYS

Specific instructions for Radiological Surveys for the trailers were outlined in the Reconnaissance Level Characterization Plan for the T690 Complex Results from these scoping surveys demonstrated that all results were below detection limits for all trailers

4.0 DATA QUALITY ASSESSMENT

All sampling data were reviewed and considered valid and thereby usable, according to sampling, analytical, and record keeping procedures DQOs for the characterization have been satisfied

5.0 DECISIONS MADE

Minimal wastes will be generated as a result of the removal of the T690 Trailer Complex Wastes, to be generated by the project, have been characterized as sanitary The subcontractor will be responsible for the removal of all skirting material from the building to be reused at a later date Skirting material will be stored inside trailer units to prevent damage Scrap metal removed from the Trailer Complex (i e , excavated conduit) will be recycled through the Property Utilization and Disposal (PU&D) scrap metals deposit area The existing pier footings will be demolished and the debris sent to the RFETS landfill

6.0 ATTACHMENTS

6.1 Building 690 Trailer Complex Decommissioning Project Characterization Radiological Instructions

6.2 Asbestos Characterization Report, Addendum to T690 Trailer Complex, April 2, 1997

6.3 Environmental Survey Draft Report J A Jones Construction Services T690 Office Trailers, Rocky Flats, May 9, 1996

7.0 REFERENCES (NOT ATTACHED)

7.1 Reconnaissance Level Characterization Report for the Building T690 Removal Project, April 2, 1997

7.2 Reconnaissance Level Characterization Report for the Building 980 Cluster, March 1997

7.3 Trailer 690 Complex Project Management Plan (PMP), Draft, March 18, 1997

ATTACHMENT 6.1

BUILDING 690 TRAILER COMPLEX DECOMMISSIONING PROJECT CHARACTERIZATION RADIOLOGICAL INSTRUCTIONS

ATTACHMENT 6.2

ASBESTOS CHARACTERIZATION REPORT ADDENDUM TO T690 TRAILER COMPLEX

ATTACHMENT 6.3

ENVIRONMENTAL SURVEY DRAFT REPORT FOR J.A. JONES CONSTRUCTION SERVICES T690A OFFICE TRAILERS AT ROCKY FLATS

ATTACHMENT 6.2

ASBESTOS CHARACTERIZATION REPORT ADDENDUM TO T690 TRAILER COMPLEX

Asbestos Characterization Report

Addendum to T690 Trailer Complex

Rocky Flats Environmental Technology Site

Prepared by:

Scientific Ecology Group for

Rocky Mountain Remediation Services, L. L. C.

Revision 0

July 1997

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ASBESTOS CHARACTERIZATION REPORT

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ADDENDUM TO T690 INSPECTIONS

1.0 INTRODUCTION

This report is supplemental to the inspections performed by EG&G Rocky Flats, Inc personnel in 1994 and the Gobbell Hays inspection performed in 1996 During the week of March 24-28, 1997 and March 31-April 4, 1997, the T690 Trailer Complex, including trailers B through H, J through N were re-evaluated to determine the locations and quantities of asbestos containing materials The re-evaluation included the review of previous inspections and the physical inspection of the complex

The asbestos inspection was conducted according to the guidelines set forth by the Asbestos Hazard Emergency Response Act and complies with the U S Environmental Protection Agency (EPA), Occupational Safety and Health Administration and State of Colorado regulations covering asbestos inspections

In summary, the 1994 and subsequent 1996 inspections covered the usual suspected materials Suspected materials missing or not identified from the original inspections included ceiling tile, pipe and wall insulation and roofing materials Thirteen additional samples were acquired All but one sample tested negative for asbestos The single positive sample was of the black roofing mastic sampled on T690B Should this material be encountered on roofs of other trailers in this complex, it should be assumed to be asbestos containing material

Included in this report is the location and description of the additional materials sampled, the location, assessment, and approximate amounts of the Asbestos Containing Materials (ACM) discovered during the supplemental sampling, and related documentation of the process Each trailer is reported separately

2.0 ASBESTOS SURVEY

Bulk samples were acquired to determine the presence of asbestos in building materials Suspect materials were chosen based on historical significance or on the judgement of the accredited inspector Each sample was assigned an individual number made up of the building number, the date the sample was acquired, the initials of the sampling technician, and a three digit number in sequence All samples were acquired in a random manner representative of the suspected material

All bulk samples were analyzed by Reservoirs Environmental Services, Inc (RESI) of Denver, Colorado RESI is accredited through the National Institute of Standards and Technology (NIST) and participates in the NIST National Voluntary Laboratory Accreditation Program as required by the EPA Bulk samples were analyzed by Polarized Light Microscopy in compliance with guidelines established by the EPA 40 CFR 763, Subpart F, Appendix A Asbestos concentrations were visually estimated and reported in percent by layer of each sample

3.0 EVALUATION/UPDATE OF PREVIOUS INSPECTIONS

The T690 Trailer Complex was inspected for asbestos in July 1994 by employees of the Health and Safety Department of EG&G Rocky Flats T690A was once again inspected by Gobbell Hays Partners (GHP) in 1996 The findings, including the inspection reports, were discovered through due diligence and interviews with Rocky Mountain Remediation Services, L L C and GHP staff who worked on the project Contained herein is the findings of a review of the inspection documents Each trailer is evaluated separately

A Trailer This trailer was also inspected in 1996 by GHP No additional samples are necessary ACM's discovered include floor tile, sheet vinyl flooring, and roofing sealer

B Trailer This trailer has floor tile testing positive from the 1994 inspection Additional samples (12 total) of ceiling tile, roofing materials and cove base were acquired The ceiling tiles and cove base contained no detectable amounts of asbestos

Addendum to Asbestos Inventory.
Approximately 130 square feet of black roofing mastic, located on the roof jacks (vents, ducts and other penetrations) Since this material was non-friable at the time of the inspection, no assessment is necessary

C Trailer The 1994 inspection discovered no asbestos No additional samples were acquired

D Trailer The 1994 inspection discovered no asbestos No additional samples were acquired

E Trailer The 1994 inspection discovered no asbestos One additional sample of the roofing material was acquired The roofing material sampled contained no detectable amounts of asbestos

F Trailer The 1994 inspection discovered no asbestos No additional samples were acquired

G Trailer The 1994 inspection discovered no asbestos No additional samples will be required

H Trailer The 1994 inspection discovered no asbestos No additional samples were acquired

J Trailer The 1994 inspection discovered no asbestos No additional samples were acquired

K Trailer The 1994 inspection discovered asbestos containing floor tile No additional samples were acquired

L Trailer The 1994 inspection discovered no asbestos No additional samples were acquired

M Trailer The 1994 inspection discovered no asbestos One sample of vapor barrier mastic on pipe insulation was acquired This sample indicated no detectable levels of asbestos present

N Trailer This trailer was not included in the 1994 inspections The 1990 manufacturing date precludes any sampling for asbestos The manufacturer was called for information Alan Koenig with General Electric Capital stated that this unit (#4480) did not have any asbestos containing materials installed

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BULK SAMPLE DATA TABLE

Sample Number	Sample Description and Location	Lab Result
T690B-970325-MS-001	6' brown cove base and tan adhesive, from west office, east of safety glass office, east wall, 7' north of SE corner	ND
T690B-970325-MS-002	Tan fibrous wall insulation, from west office, east of safety glass office, south wall, 3' west of SE corner, 4' from the floor	ND
T690B-970325-MS-003	12" floor tile, beige/grey flecks and black mastic from storage in west hall, 4' south of north wall, 3' west of east wall	Archived, not analyzed
T690B-970325-MS-004	4' x 8' ceiling panel, white with simulated wood grain and longitudinal scallops, from west hall, north wall, 13' east of west entry, 2" south of north wall	ND
T690B-970325-MS-005	12" floor tile, beige with brown streaks and clear adhesive, from west trailers (2nd from west), at south entry, 1' north of south wall, 12' east of west wall	Archived, not analyzed
T690B-970325-MS-006	2' x 4' ceiling tile, white with large and small pin hole pattern, from east trailers, south-west office, 3' south of the north wall, 4' east of the west wall	ND
T690B-970325-MS-007	4' x 8' ceiling panel, white, with simulated wood grain, from east trailers, north-east office, 4' south of north wall, 9' west of east wall	ND
T690B-970325-MS-008	2' x 4' ceiling tile, white, with bird track pattern, from conference room,6' south of north wall, 9' east of west wall	ND
Sample Number	**Sample Description and Location**	**Lab Result**
T690B-970325-MS-009	2' x 4' ceiling tile, white, with longitudinal grooves, large deep pin holes, from conference room, 9' east of west wall, 5' south of north wall	ND
T690B-970325-MS-010	2' x 4' ceiling tile, white, with latitudinal grooves and pin holes, from main hall in east trailers, at main entry, 2' south of north wall, 4' east of west doorway	ND
T690B-970325-MS-011	Tar paper, tar and white gravel shingle, from south edge of roof, 2' west of entry door #2	ND
T690B-970331-MS-012	Tar roof mastic, from south edge of roof, 8' east of entry door #3 roof	13%
T690E-970331-MS-001	Tar and white gravel shingle, from south edge, at SW corner of SW entry roof	ND
T690M-970408-MS-001	Vapor barrier mastic, on water pipe insulation, from trailer crawlspace, at east access door, 2' west of east edge, 11' south of NE corner	ND

Note ND means None Detected

ATTACHMENT 6.3

**ENVIRONMENTAL SURVEY DRAFT REPORT
FOR
J.A. JONES CONSTRUCTION SERVICES
T690A OFFICE TRAILERS
AT ROCKY FLATS**

ENVIRONMENTAL SURVEY
DRAFT REPORT

FOR

J.A. JONES CONSTRUCTION SERVICES
T690A OFFICE TRAILERS
ROCKY FLATS

Prepared by

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May 9, 1996

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DRAFT REPORT

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APPENDICES

1.0 INTRODUCTION

In May 1996, Gobbell-Hays Partners, Inc. (GHP) conducted an asbestos and lead-containing paint inspection at the J.A. Jones Construction Services T690A Trailer Offices located at Rocky Flats. The purpose of the survey was to prepare for demolition and/or removal of the trailers from the Rocky Flats site.

The asbestos inspection was conducted according to guidelines set forth by the Asbestos Hazard Emergency Response Act (AHERA) and complies with the United States Environmental Protection Agency (USEPA), Occupational Safety and Health Administration (OSHA), and State of Colorado asbestos regulations.

The lead paint inspection was designed to identify painted surfaces that contain a "detectable" amount of lead in order to comply with OSHA's Lead Exposure in Construction; Interim Final Rule (29 CFR 1926 62).

The enclosed report includes the location, hazard assessment, and appropriate response action or recommendation for all identified asbestos containing materials (ACM), as well as the location and description of all lead-containing paint. Photo documentation of bulk sample materials with bulk sample numbers and laboratory analysis results of all acquired bulk samples are also included.

2.0 ASBESTOS SURVEY

2.1 Inspection Procedures

Bulk samples were collected to identify asbestos containing building materials (ACBM). Bulk samples were given unique identification numbers, consisting of three parts. The first letter, "B", designates the sample as a bulk asbestos sample. The second set of letters "96004.03" identifies the GHP project number. The last group of numerals identify the sequential sample number for this project.
A total of 33 bulk samples were collected from suspect asbestos containing building materials. The suspect materials included miscellaneous materials and thermal system insulation (TSI). Bulk asbestos samples were collected from inconspicuous areas so that extensive repairs would not be necessary.

All bulk samples were analyzed by Reservoirs Environmental Services, Inc. (RESI) of Denver, Colorado. RESI is accredited through the National Institute of Standards and Technology (NIST) and participates in the NIST National Voluntary Lab Accreditation Program (NVLAP) as required by the EPA. Bulk samples were analyzed by Polarized Light Microscopy (PLM) in compliance with guidelines established by the EPA (40 CFR Part 763, Subpart F, Appendix A). Asbestos concentrations were visually estimated and given in percent for each layer of the samples. Point Count analysis was required for some bulk samples.

2.2 Description and Hazard Assessment of ACM

2.2.1 Off-White, Mosaic 12"x12" Floor Tile

Remnant non-friable, ACM floor tiles were present under carpet throughout the west trailers and approximately 5,700 square feet of ACM floor tiles were present under carpet throughout the east trailers. Damage to the floor tiles must be assumed because many tiles had been removed. However, all tiles were covered by carpet and not exposed.

The EPA AHERA Hazard Assessment Category for the ACM floor tile is "damaged miscellaneous ACBM". The appropriate response action is to periodically inspect the ACM for change in condition or remove the ACM floor tiles following proper abatement procedures if they would be disturbed during any renovation activities. The ACM floor tiles may remain in place if demolition occurs provided all requirements of OSHA's 29 CFR 1926.1101 are followed and the material remains non-friable.

2.2.2 Silver Roof Sealant

There were approximately 13,500 square feet of non-friable, ACM silver sealant material on the roofs of all trailers. The ACM was in good condition at the time of inspection.

The EPA AHERA Hazard Assessment Category for the ACM sealant material is miscellaneous "ACBM with potential for damage". The ACM roof coating may remain in place if demolition occurs provided all requirements of OSHA's 29 CFR 1926.1101 are followed and the material remains non-friable.

2.2.3 Gray Sheet Vinyl Backing

There were approximately 350 square feet of non-friable ACM sheet vinyl floor covering in the restrooms of the east trailers. The ACM was in good condition at the time of inspection.

The EPA AHERA Hazard Assessment Category for the ACM sheet vinyl is miscellaneous "ACBM with potential for damage". The appropriate response action is to periodically inspect the ACM for change in condition or remove the ACM sheet vinyl following proper abatement procedures prior to demolition activities

2.3 Asbestos Regulatory Review and Recommendations

2.3.1 Demolition

The Colorado Department of Health, Regulation 8, Part B, requires that notification be given to the Colorado Pollution Control Division of the intent to demolish, renovate, or perform asbestos abatement in any building, structure, facility or installation which contains asbestos in any amount that exceeds 160 square feet, 260 linear feet or the equivalence of a 55 gallon drum, whether friable or not.

The EPA National Emissions Standard for Hazardous Air Pollutants (NESHAP) regulation requires that ACM be identified prior to demolition and renovation activities. NESHAP requires that no friable ACM be disturbed during these construction activities.

The October 11, 1994 revision to the Occupational Safety and Health Administration Construction Standard (29 CFR 1926.1101) applies to demolition or salvage of

structures where asbestos is present, removal or encapsulation of materials containing asbestos, and transportation, disposal, storage, containment of, and housekeeping activities involving asbestos. The Standard requires that suspect ACM in buildings built prior to 1980 be assumed to be asbestos or an inspection be conducted in accordance with AHERA

The OSHA Construction Standard separates asbestos work into four (4) classes, each class representing increased hazards, and provides regulations for each class, including exposure assessments, respiratory protection, protective clothing, hygiene facilities, and administrative requirements. Class I involves the removal of TSI and surface applied materials. Class II involves the removal of all other ACM including roofing, siding, and floor coverings. Class III involves repair and maintenance operations where ACM is likely to be disturbed. Class IV covers maintenance and custodial activities during which employees contact ACM.

Based on the asbestos inspection performed by GHP, Class II requirements outlined in 29 CFR 1926.1101 will apply to demolition of the office trailers. Requirements include but are not limited to the following: 1) The area shall be demarcated as a regulated area in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure; 2) All asbestos work performed within the regulated area shall be supervised by a competent person; 3) An initial exposure assessment shall be conducted for workers involved in demolition where ACM roofing materials or floor coverings are disturbed; 4) Roofing material shall be removed intact to the extent feasible; 5) Wet methods shall be employed where feasible; and 6) If cutting machines are used on roofing materials, they shall be continuously misted during use, unless a competent person determines that misting substantially decreases worker safety. All loose dust left by sawing operations on roofing materials must be HEPA vacuumed immediately.

2.3.2 Disposal

Demolition debris that contains non-friable, tar-impregnated ACM roofing materials or ACM floor tiles is not regulated by the Colorado Department of Health and Environment

3.0 LEAD-CONTAINING PAINT SURVEY

3.1 Inspection Procedures

Bulk paint samples were collected to identify major sources of lead containing paint.All samples were given unique identification numbers, consisting of three parts. The first letters "BL" designate the sample as a bulk lead sample. The second set of numbers "96004.03" identifies the GHP project number. The last set of numerals identify the sequential sample number for this project.

A total of 24 bulk paint samples were collected in this survey (see Appendix C for bulk paint sample inventory and lab results). All bulk samples were submitted to Reservoirs Environmental Services, Inc (RESI) of Denver, Colorado, a third party independent laboratory. RESI is properly accredited for bulk paint analysis through the American Industrial Hygiene Association. Bulk paint samples were analyzed with Atomic Absorption Spectrometry (EPA Method SW 846-3050A/7420). Where a precise sample area could be defined and substrate material was included in the sample, such as on drywall substrates, the laboratory results are reported in mg/cm2. Where a precise sample area could not be defined and no substrate material was included in the sample, such as on metal surfaces, the laboratory results are reported in percent.

3.2 Location and Description of Lead-Containing Paint

Lead-containing paint is defined in this survey as paint that contains lead in concentrations above the detection limit of Atomic Absorption Sectrometry - Flame Analysis. Lead-containing paint was identified and described by the color which was exposed at the surface of the painted material. However, other colors of paint which are covered by the exterior layer may have contributed to the lead concentration. Sample inventory and laboratory results are included in Appendix C. Detectable concentrations of lead were identified as follows:

3.2.1 Off-White

3.2.1.1 A low concentration of lead was detected on off-white painted ceiling surfaces throughout the west trailers.

3.2.2 White

3.2.2.1 A low concentration of lead was detected on white painted doors and door frames throughout the east and west trailers

3.2.2.2 A low concentration of lead was detected on white painted siding and skirting on the west trailers.

3.2.2.3 A low concentration of lead was detected on white painted skirting on the east trailers.

3.2.3 **Red**

3.2.3.1 A low concentration of lead was detected on red painted walls and columns at fire extinguisher locations throughout the east and west trailers.

3.2.4 **Yellow**

3.2.4.1 A high concentration of lead was detected on yellow painted stair step and rail surfaces at entrance vestibules.

3.2.5 **Gray**

3.2.5.1 A low concentration of lead was detected on gray painted entrance doors at the middle access area.

3.3 Lead Paint Regulatory Review and Recommendations

3.3.1 Demolition

In June, 1995, the U.S. Department of Housing and Urban Development (HUD) published the *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* pursuant to Title X of the Housing and Community Development Act of 1992. This document replaced the 1990 publication, *Lead-Based Paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing.* The new publication addresses lead hazards posed by paint, dust, and soil in the residential environment. It provides specific guidelines for XRF and bulk paint sampling in housing including sample locations, sample collection procedures, and laboratory analysis procedures. In addition, it provides guidelines for hazard assessment of lead-based paint, abatement of lead-based paint, and clearance sampling. The Guidelines define lead-based paint as paint that contains 1.0 milligrams of lead per square centimeter of surface area. Although the *Guidelines* act as a good reference for lead paint inspections, they do not apply to non-HUD homes and are not enforceable by law unless a Federal, State, or local statute requires adherence to certain parts of the publication.

OSHA's CFR 1926.62 applies to the disturbance or demolition of components that contain lead in **detectable quantities**. Therefore, the employee protection and safety precautions as outlined by CFR 1926.62 must be initiated if any of the lead-containing painted surfaces identified in this report are physically disturbed during moving procedures or demolition activities. CFR 1926.62 applies to construction activities where an employee may be exposed to lead. This includes but is not limited to the following:

* Demolition or salvage of structures where lead or materials containing lead are present.
* Removal or encapsulation of materials containing lead.
* New construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead, or materials containing lead.

The regulation states that where lead containing coatings or paint are present, an initial employee exposure assessment must be conducted when any of the following activities take place: 1) manual demolition of structures, 2) manual scraping, 3) manual sanding, 4) heat gun applications, 5) power tool cleaning, 6) abrasive blasting, 7) welding, 8) cutting, and 9) torch burning. The employee exposure assessment includes air monitoring for airborne lead levels above the action level of 30 micrograms/cubic meter or permissible exposure limit (PEL) of 50 micrograms/cubic meter. During the employee exposure assessment, the employer is required to implement the following protective measures: 1) appropriate respiratory protection designed for airborne lead levels up to at least ten times the PEL, 2) personal protective clothing, 3) clean change areas equipped with separate storage facilities for protective work clothing and equipment and street clothes, 4) hand washing facilities, 5) initial biological monitoring in the form of employee blood sampling, and 6) lead hazard training. In addition, the regulation requires engineering and work practice controls, written compliance programs, and medical surveillance of employees.

3.3.2 Disposal

The primary Federal statute governing non-hazardous and hazardous waste disposal is the Resource Conservation and Recovery Act (RCRA). According to RCRA, where lead-containing paint is present, a waste characterization should be performed prior to disposal. Waste characterization includes paint sample collection and laboratory analysis using the Toxicity Characteristic Leaching Procedure (TCLP) method as outlined by EPA's 40 CFR 261.24. Characterization of lead-containing paint is also described in Appendix XI of EPA's Region II Technical Assistance Document for Complying with the TCLP Rule. The painted building materials must be considered toxic waste and disposed of in the appropriate manner if the TCLP results in extraction of lead above five parts per million

APPENDIX A

CERTIFICATIONS

STATEMENT OF CERTIFICATION

The lead-containing paint inspection was conducted by Mr. Patrick Cleveland of Gobbell-Hays Partners, Incorporated. Mr. Cleveland has been trained and certified in lead-based paint inspection procedures.

Signed: _____

The asbestos inspection was conducted by Mr Michael Schluterbush of Gobbell-Hays Partners, Incorporated. Mr. Schluterbush has been trained and certified by EPA and the State of Colorado as an asbestos building inspector

State of Colorado Certification Number: [redacted]

EPA-AHERA Accreditation Number: [redacted]

Signed: _____

APPENDIX B

BULK ASBESTOS SAMPLE INVENTORY AND LABORATORY RESULTS

J.A. JONES CONSTRUCTION SERVICES
T690A OFFICE TRAILERS
BULK ASBESTOS SAMPLE INVENTORY

SAMPLE #	DESCRIPTION/LOCATION	ASBESTOS CONTENT	POINT COUNT
B-96004.03-01	LT GRAY 4" COVE BASE AND TAN ADHESIVE - TRAILER #1, NW CORNER OFFICE, W. WALL, 4' FROM NE CORNER	A. ND	
B-96004.03-02	LT GRAY FABRIC PANEL, FIBROUS FILL, AND TAN ADHESIVE - TRAILER #1, NW CORNER OFFICE, W WALL, 20' FROM N. WALL, 3' ABOVE FLOOR	A. ND	
B-96004.03-03	CREAM DUCT COVER - TRAILER #3, ROOF, 5' FROM S. EDGE, ON HVAC DUCT	A. ND	
B-96004.03-04	SILVER COATING MATERIAL (A) AND BLACK TAR (B) - TRAILER #4, ROOF, 4' FROM S. EDGE	A. 2% B. TR	
B-96004.03-05	SILVER COATING MATERIAL (A), WHITE RESINOUS PATCH MATERIAL (B), AND BLACK TAR (C) - TRAILER #11, ROOF, 15' FROM N. EDGE	A. 4% B. ND C ND	Pending
B-96004 03-06	TAN CAULK - TRAILER #8, 6' FROM N EDGE, ON ROUND DUCT	A. ND	
B-96004 03-07	CREAM 12"X12" FLOOR TILE (A) AND TAN ADHESIVE (B) - TRAILER #5, AT ENTRANCE TO MEN'S RESTROOM	A. ND B. ND	
B-96004 03-08	GRAY COVE BASE AND TAN ADHESIVE - TRAILER #5, MEN'S RESTROOM, E. WALL	A. ND	
B-96004 03-09	CREAM WALL PANEL ADHESIVE - TRAILER #5, CORRIDOR ADJACENT TO MEN'S RESTROOM, S. WALL, 4.5' ABOVE FLOOR, BEHIND WALL PANEL	A. ND	
B-96004 03-10	MOSAIC 12"X12" FLOOR TILE (A) AND TAN ADHESIVE (B) - TRAILER #8, N. END, 7' FROM E. WALL, 3' FROM N. WALL, UNDER CARPET	A. 10% B. ND	
B-96004.03-11	MOSAIC 12"X12" FLOOR TILE (A) AND BLACK ADHESIVE (B) - TRAILER #10, MIDDLE AREA, 14' FROM S. WALL, AT E. EDGE OF TRAILER JOINT, UNDER CARPET	A. 8% B. ND	

ND = NONE DETECTED

J.A. JONES CONSTRUCTION SERVICES
T690A OFFICE TRAILERS
BULK ASBESTOS SAMPLE INVENTORY

SAMPLE #	DESCRIPTION/LOCATION	ASBESTOS CONTENT	POINT COUNT
B-96004 03-12	BROWN COVE BASE AND CLEAR ADHESIVE - TRAILER #11, MAIN AREA, S. WALL, 4' E. OF M LITTLETON OFFICE DOOR	A. ND	
B-96004 03-13	SMALL MOSAIC PATTERN SHEET VINYL (A) AND GRAY BACKING MATERIAL (B) - TRAILER #13, MEN'S RESTROOM, AT ENTRANCE	A. ND B 70%	
B-96004 03-14	WHITE CEILING TILE - TRAILER #4, 22' FROM S WALL, BEHIND CEILING DIFFUSER	A. ND	
B-96004.03-15	OFF-WHITE CEILING TILE - TRAILER #1, 8' E. OF SW ENTRANCE	A. ND	
B-96004 03-16	DRYWALL - TRAILER #1, AT ENTRANCE TO SW OFFICE, E. SIDE OF DOOR JAMB	A ND	
B-96004 03-17	WHITE/GOLD MASONITE PANEL - TRAILER #5, JANITOR'S CLOSET, W. WALL, 4'FROM ABOVE FLOOR	A. ND	
B-96004.03-18	LT BEIGE WALL PANEL - TRAILER #5, MEN'S RESTROOOM, E. WALL, BASE OF N URINAL	A. ND	
B-96004 03-19	LT GRAY, 1'X1' CEILING TILE (A) AND BROWN (B) ADHESIVE - TRAILER #5, OFFICE JUST S. OF MEN'S ROOM, 3' FROM S. WALL	A. ND B ND	
B-96004.03-20	DRYWALL - TRAILER #6, W. WALL, 7' N. OF W. ENTRANCE	A. ND	
B-96004 03-21	DRYWALL (A) AND JOINT COMPOUND (B) - MIDDLE MAIN ACCESS AREA, 1ST ROOM FROM SOUTH, SE CORNER	A. ND B ND	
B-96004.03-22	DRYWALL (A) AND JOINT COMPOUND (B) - MIDDLE MAIN ACCESS AREA, W WALL, 25' FROM S ENTRANCE	A. ND B. ND	
B-96004 03-23	DRYWALL (A) AND JOINT COMPOUND (B) - MIDDLE MAIN ACCESS AREA, W. WALL, 20' FROM N ENTRANCE	A. ND B ND	

ND = NONE DETECTED

J.A. JONES CONSTRUCTION SERVICES
T690A OFFICE TRAILERS
BULK ASBESTOS SAMPLE INVENTORY

SAMPLE #	DESCRIPTION/LOCATION	ASBESTOS CONTENT	POINT COUNT
B-96004.03-24	WHITE CEILING TILE WITH RANDOM GROOVES - TRAILER #9, CONFERENCE ROOM 1, 4' FROM S ENTRANCE	A. ND	
B-96004.03-25	WHITE CEILING TILE WITH ROUGH TEXTURE AND LONGITUDINAL GROOVES - TRAILER #10, MAIN E-W CORRIDOR, 10' FROM E. ENTRANCE	A. ND	
B-96004.03-26	DRYWALL - TRAILER #10, E. WALL, 2' FROM NE CORNER	A. ND	
B-96004.03-27	DRYWALL - TRAILER #14, E. WALL, 12' FROM NE CORNER	A. ND	
B-96004 03-28	OFF-WHITE ACOUSTIC WALL PANEL - TRAILER #15, N WALL, 3' FROM NW CORNER	A. ND	
B-96004 03-29	CREAM VAPOR BARRIER MASTIC - CRAWLSPACE BENEATH W. TRAILERS, 20' E. OF N. ACCESS, 6' FROM N. SKIRTING, ON PIPE TSI	A. ND	
B-96004 03-30	CREAM VAPOR BARRIER MASTIC - CRAWLSPACE BENEATH W. TRAILERS, 12' E. OF N. ACCESS, 15' FROM N. SKIRTING, ON PIPE TSI	A. ND	
B-96004 03-31	CREAM VAPOR BARRIER MASTIC - CRAWLSPACE BENEATH W. TRAILERS, 15' E. OF N. ACCESS, 8' FROM N. SKIRTING, ON PIPE TSI	A. ND	
B-96004 03-32	CREAM DUCT WRAP - TRAILER #2, ROOF, 6' FROM S. EDGE, ON TOP OF HVAC DUCT	A. ND	
B-96004 03-33	CREAM DUCT WRAP - ROOF, E JUNCTURE OF TRAILER #2 AND #3, 6' FROM S EDGE, BOTTOM OF HVAC DUCT	A. ND	

ND = NONE DETECTED

APPENDIX C

BULK PAINT SAMPLE INVENTORY AND LABORATORY RESULTS

J.A. JONES CONSTRUCTION SERVICES
T690A OFFICE TRAILERS
BULK PAINT SAMPLE INVENTORY

SAMPLE #	DESCRIPTION/LOCATION	LAB RESULT
BL-96004.03-01	YELLOW WOOD - NORTHWEST CORNER ENTRANCE, STEP BALLISTER	0 002 mg/cm2
BL-96004.03-02	WHITE WOOD - NORTHWEST CORNER ENTRANCE, EXTERIOR VESTIBULE, WEST WALL	0 002 mg/cm2
BL-96004 03-03	WHITE METAL - NORTHWEST CORNER ENTRANCE, EXTERIOR DOOR	BDL
BL-96004.03-04	BROWN METAL (OLIVE UNDERCOAT) - SOUTHWEST CORNER ENTRANCE, INTERIOR TRAILER DOOR, DOOR FRAME	BDL
BL-96004 03-05	OFF-WHITE DRYWALL - WEST TRAILER, MAIN AREA, CEILING, 8' FROM WEST WALL, 4' FROM SOUTH WALL	0 011 mg/cm2
BL-96004 03-06	WHITE METAL - MIDDLE ACCESS AREA, NW ENTRANCE DOOR TO WEST TRAILERS	0 151 %
BL-96004.03-07	GRAY METAL - SW MEN'S ROOM, STALL PARTITION PANEL	BDL
BL-96004.03-08	WHITE DRYWALL - SW MEN'S ROOM, CEILING, 1' FROM NORTH WALL, 3' FROM EAST WALL	0 010 mg/cm2
BL-96004 03-09	GRAY WOOD - MIDDLE ACCESS AREA, BASEBOARD OF EAST WALL, 20' FROM SOUTH ENTRANCE	BDL
BL-96004 03-10	RED WOOD - MIDDLE ACCESS AREA, NEAR EAST TRAILER ENTRANCE ON SUPPORT COLUMN	0 017 mg/cm2
BL-96004.03-11	WHITE DRYWALL - MIDDLE ACCESS AREA, WEST WALL, 30' FROM SOUTH ENTRY	BDL
BL-96004 03-12	WHITE WOOD - TRAILER #9, NORTH WALL, 10' FROM SW CORNER	BDL
BL-96004.03-13	WHITE PARTICLE BOARD - TRAILER #9, CEILING, 10' FROM SOUTH WALL, 6' FROM WEST WALL	BDL
BL-96004 03-14	WHITE METAL (OLIVE UNDERCOAT) - TRAILER #11, DOOR TO ROOM 25, WEST OF MEN'S ROOM	BDL
BL-96004 03-15	OFF-WHITE DRYWALL - TRAILER #15, WEST WALL, 20' FROM SOUTH WALL	BDL

BDL = BELOW DETECTION LIMIT

ENVIRONMENTAL SURVEY
DRAFT REPORT

FOR

J.A. JONES CONSTRUCTION SERVICES
T690A OFFICE TRAILERS
ROCKY FLATS

Prepared by

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Lakewood, CO 80214
(303) 274-1211
GHP Project 96004.03

May 9, 1996

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APPENDICES

1.0 INTRODUCTION

In May 1998, Gobbell-Hays Partners, Inc. (GHP) conducted an asbestos and lead-containing paint inspection at the J.A. Jones Construction Services T690A Trailer Offices located at Rocky Flats. The purpose of the survey was to prepare for demolition and/or removal of the trailers from the Rocky Flats site.

The asbestos inspection was conducted according to guidelines set forth by the Asbestos Hazard Emergency Response Act (AHERA) and complies with the United States Environmental Protection Agency (USEPA), Occupational Safety and Health Administration (OSHA), and State of Colorado asbestos regulations.

The lead paint inspection was designed to identify painted surfaces that contain a "detectable" amount of lead in order to comply with OSHA's Lead Exposure in Construction; Interim Final Rule (29 CFR 1926.62).

The enclosed report includes the location, hazard assessment, and appropriate response action or recommendation for all identified asbestos containing materials (ACM), as well as the location and description of all lead-containing paint. Photo documentation of bulk sample materials with bulk sample numbers and laboratory analysis results of all acquired bulk samples are also included.

2.0 ASBESTOS SURVEY

2.1 Inspection Procedures

Bulk samples were collected to identify asbestos containing building materials (ACBM). Bulk samples were given unique identification numbers, consisting of three parts. The first letter, "B", designates the sample as a bulk asbestos sample. The second set of letters "96004.03" identifies the GHP project number. The last group of numerals identify the sequential sample number for this project.
A total of 33 bulk samples were collected from suspect asbestos containing building materials. The suspect materials included miscellaneous materials and thermal system insulation (TSI). Bulk asbestos samples were collected from inconspicuous areas so that extensive repairs would not be necessary.

All bulk samples were analyzed by Reservoirs Environmental Services, Inc. (RESI) of Denver, Colorado. RESI is accredited through the National Institute of Standards and Technology (NIST) and participates in the NIST National Voluntary Lab Accreditation Program (NVLAP) as required by the EPA. Bulk samples were analyzed by Polarized Light Microscopy (PLM) in compliance with guidelines established by the EPA (40 CFR Part 763, Subpart F, Appendix A). Asbestos concentrations were visually estimated and given in percent for each layer of the samples. Point Count analysis was required for some bulk samples.

2.2 Description and Hazard Assessment of ACM

2.2.1 Off-White, Mosaic 12"x12" Floor Tile

Remnant non-friable, ACM floor tiles were present under carpet throughout the west trailers and approximately 5,700 square feet of ACM floor tiles were present under carpet throughout the east trailers. Damage to the floor tiles must be assumed because many tiles had been removed. However, all tiles were covered by carpet and not exposed.

The EPA AHERA Hazard Assessment Category for the ACM floor tile is "damaged miscellaneous ACBM". The appropriate response action is to periodically inspect the ACM for change in condition or remove the ACM floor tiles following proper abatement procedures if they would be disturbed during any renovation activities. The ACM floor tiles may remain in place if demolition occurs provided all requirements of OSHA's 29 CFR 1926.1101 are followed and the material remains non-friable.

2.2.2 Silver Roof Sealant

There were approximately 13,500 square feet of non-friable, ACM silver sealant material on the roofs of all trailers. The ACM was in good condition at the time of inspection.

The EPA AHERA Hazard Assessment Category for the ACM sealant material is miscellaneous "ACBM with potential for damage". The ACM roof coating may remain in place if demolition occurs provided all requirements of OSHA's 29 CFR 1926.1101 are followed and the material remains non-friable.

2.2.3 Gray Sheet Vinyl Backing

There were approximately 350 square feet of non-friable ACM sheet vinyl floor covering in the restrooms of the east trailers. The ACM was in good condition at the time of inspection.

The EPA AHERA Hazard Assessment Category for the ACM sheet vinyl is miscellaneous "ACBM with potential for damage". The appropriate response action is to periodically inspect the ACM for change in condition or remove the ACM sheet vinyl following proper abatement procedures prior to demolition activities.

2.3 Asbestos Regulatory Review and Recommendations

2.3.1 Demolition

The Colorado Department of Health, Regulation 8, Part B, requires that notification be given to the Colorado Pollution Control Division of the intent to demolish, renovate, or perform asbestos abatement in any building, structure, facility or installation which contains asbestos in any amount that exceeds 160 square feet, 260 linear feet or the equivalence of a 55 gallon drum, whether friable or not.

The EPA National Emissions Standard for Hazardous Air Pollutants (NESHAP) regulation requires that ACM be identified prior to demolition and renovation activities. NESHAP requires that no friable ACM be disturbed during these construction activities.

The October 11, 1994 revision to the Occupational Safety and Health Administration Construction Standard (29 CFR 1926.1101) applies to demolition or salvage of

structures where asbestos is present, removal or encapsulation of materials containing asbestos, and transportation, disposal, storage, containment of, and housekeeping activities involving asbestos. The Standard requires that suspect ACM in buildings built prior to 1980 be assumed to be asbestos or an inspection be conducted in accordance with AHERA

The OSHA Construction Standard separates asbestos work into four (4) classes, each class representing increased hazards, and provides regulations for each class, including exposure assessments, respiratory protection, protective clothing, hygiene facilities, and administrative requirements. Class I involves the removal of TSI and surface applied materials. Class II involves the removal of all other ACM including roofing, siding, and floor coverings. Class III involves repair and maintenance operations where ACM is likely to be disturbed. Class IV covers maintenance and custodial activities during which employees contact ACM.

Based on the asbestos inspection performed by GHP, Class II requirements outlined in 29 CFR 1926.1101 will apply to demolition of the office trailers Requirements include but are not limited to the following: 1) The area shall be demarcated as a regulated area in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure; 2) All asbestos work perfomed within the regulated area shall be supervised by a competent person; 3) An initial exposure assessment shall be conducted for workers involved in demolition where ACM roofing materials or floor coverings are disturbed; 4) Roofing material shall be removed intact to the extent feasible; 5) Wet methods shall be employed where feasible; and 6) If cutting machines are used on roofing materials, they shall be continuously misted during use, unless a competent person determines that misting substantially decreases worker safety. All loose dust left by sawing operations on roofing materials must be HEPA vacuumed immediately.

2.3.2 Disposal

Demolition debris that contains non-friable, tar-impregnated ACM roofing materials or ACM floor tiles is not regulated by the Colorado Department of Health and Environment.

3.0 LEAD-CONTAINING PAINT SURVEY

3.1 Inspection Procedures

Bulk paint samples were collected to identify major sources of lead containing paint.All samples were given unique identification numbers, consisting of three parts. The first letters "BL" designate the sample as a bulk lead sample. The second set of numbers "96004.03" identifies the GHP project number. The last set of numerals identify the sequential sample number for this project.

A total of 24 bulk paint samples were collected in this survey (see Appendix C for bulk paint sample inventory and lab results). All bulk samples were submitted to Reservoirs Environmental Services, Inc. (RESI) of Denver, Colorado, a third party independent laboratory. RESI is properly accredited for bulk paint analysis through the American Industrial Hygiene Association. Bulk paint samples were analyzed with Atomic Absorption Spectrometry (EPA Method SW 846-3050A/7420). Where a precise sample area could be defined and substrate material was included in the sample, such as on drywall substrates, the laboratory results are reported in mg/cm2. Where a precise sample area could not be defined and no substrate material was included in the sample, such as on metal surfaces, the laboratory results are reported in percent.

3.2 Location and Description of Lead-Containing Paint

Lead-containing paint is defined in this survey as paint that contains lead in concentrations above the detection limit of Atomic Absorption Sectrometry - Flame Analysis. Lead-containing paint was identified and described by the color which was exposed at the surface of the painted material. However, other colors of paint which are covered by the exterior layer may have contributed to the lead concentration. Sample inventory and laboratory results are included in Appendix C. Detectable concentrations of lead were identified as follows:

3.2.1 Off-White

3.2.1.1 A low concentration of lead was detected on off-white painted ceiling surfaces throughout the west trailers.

3.2.2 White

3.2.2.1 A low concentration of lead was detected on white painted doors and door frames throughout the east and west trailers

3.2.2.2 A low concentration of lead was detected on white painted siding and skirting on the west trailers.

3.2.2.3 A low concentration of lead was detected on white painted skirting on the east trailers.

3.2.3 Red

3.2.3.1 A low concentration of lead was detected on red painted walls and columns at fire extinguisher locations throughout the east and west trailers.

3.2.4 Yellow

3.2.4.1 A high concentration of lead was detected on yellow painted stair step and rail surfaces at entrance vestibules.

3.2.5 Gray

3.2.5.1 A low concentration of lead was detected on gray painted entrance doors at the middle access area.

3.3 Lead Paint Regulatory Review and Recommendations

3.3.1 Demolition

In June, 1995, the U.S. Department of Housing and Urban Development (HUD) published the *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* pursuant to Title X of the Housing and Community Development Act of 1992. This document replaced the 1990 publication, *Lead-Based Paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing.* The new publication addresses lead hazards posed by paint, dust, and soil in the residential environment. It provides specific guidelines for XRF and bulk paint sampling in housing including sample locations, sample collection procedures, and laboratory analysis procedures. In addition, it provides guidelines for hazard assessment of lead-based paint, abatement of lead-based paint, and clearance sampling. The Guidelines define lead-based paint as paint that contains 1.0 milligrams of lead per square centimeter of surface area. Although the *Guidelines* act as a good reference for lead paint inspections, they do not apply to non-HUD homes and are not enforceable by law unless a Federal, State, or local statute requires adherence to certain parts of the publication.

OSHA's CFR 1926.62 applies to the disturbance or demolition of components that contain lead in **detectable quantities.** Therefore, the employee protection and safety precautions as outlined by CFR 1926.62 must be initiated if any of the lead-containing painted surfaces identified in this report are physically disturbed during moving procedures or demolition activities. CFR 1926.62 applies to construction activities where an employee may be exposed to lead. This includes but is not limited to the following:

- Demolition or salvage of structures where lead or materials containing lead are present.
- Removal or encapsulation of materials containing lead.
- New construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead, or materials containing lead.

The regulation states that where lead containing coatings or paint are present, an initial employee exposure assessment must be conducted when any of the following activities take place: 1) manual demolition of structures, 2) manual scraping, 3) manual sanding, 4) heat gun applications, 5) power tool cleaning, 6) abrasive blasting, 7) welding, 8) cutting, and 9) torch burning. The employee exposure assessment includes air monitoring for airborne lead levels above the action level of 30 micrograms/cubic meter or permissible exposure limit (PEL) of 50 micrograms/cubic meter. During the employee exposure assessment, the employer is required to implement the following protective measures: 1) appropriate respiratory protection designed for airborne lead levels up to at least ten times the PEL, 2) personal protective clothing, 3) clean change areas equipped with separate storage facilities for protective work clothing and equipment and street clothes, 4) hand washing facilities, 5) initial biological monitoring in the form of employee blood sampling, and 6) lead hazard training. In addition, the regulation requires engineering and work practice controls, written compliance programs, and medical surveillance of employees.

3.3.2 Disposal

The primary Federal statute governing non-hazardous and hazardous waste disposal is the Resource Conservation and Recovery Act (RCRA). According to RCRA, where lead-containing paint is present, a waste characterization should be performed prior to disposal. Waste characterization includes paint sample collection and laboratory analysis using the Toxicity Characteristic Leaching Procedure (TCLP) method as outlined by EPA's 40 CFR 261.24. Characterization of lead-containing paint is also described in Appendix XI of EPA's Region II Technical Assistance Document for Complying with the TCLP Rule The painted building materials must be considered toxic waste and disposed of in the appropriate manner if the TCLP results in extraction of lead above five parts per million

APPENDIX A

CERTIFICATIONS

STATEMENT OF CERTIFICATION

The lead-containing paint inspection was conducted by Mr. Patrick Cleveland of Gobbell-Hays Partners, Incorporated. Mr. Cleveland has been trained and certified in lead-based paint inspection procedures.

Signed: _____

The asbestos inspection was conducted by Mr Michael Schluterbush of Gobbell-Hays Partners, Incorporated. Mr. Schlüterbush has been trained and certified by EPA and the State of Colorado as an asbestos building inspector

State of Colorado Certification Number. [redacted]

EPA-AHERA Accreditation Number: [redacted]

Signed: _____

APPENDIX B

BULK ASBESTOS SAMPLE INVENTORY AND LABORATORY RESULTS

J.A. JONES CONSTRUCTION SERVICES
T690A OFFICE TRAILERS
BULK ASBESTOS SAMPLE INVENTORY

SAMPLE #	DESCRIPTION/LOCATION	ASBESTOS CONTENT	POINT COUNT
B-96004.03-01	LT GRAY 4" COVE BASE AND TAN ADHESIVE - TRAILER #1, NW CORNER OFFICE, W. WALL, 4' FROM NE CORNER	A. ND	
B-96004.03-02	LT GRAY FABRIC PANEL, FIBROUS FILL, AND TAN ADHESIVE - TRAILER #1, NW CORNER OFFICE, W WALL, 20' FROM N. WALL, 3' ABOVE FLOOR	A. ND	
B-96004.03-03	CREAM DUCT COVER - TRAILER #3, ROOF, 5' FROM S. EDGE, ON HVAC DUCT	A. ND	
B-96004 03-04	SILVER COATING MATERIAL (A) AND BLACK TAR (B) - TRAILER #4, ROOF, 4' FROM S. EDGE	A. 2% B. TR	
B-96004.03-05	SILVER COATING MATERIAL (A), WHITE RESINOUS PATCH MATERIAL (B), AND BLACK TAR (C) - TRAILER #11, ROOF, 15' FROM N. EDGE	A. 4% B. ND C. ND	Pending
B-96004.03-06	TAN CAULK - TRAILER #6, 6' FROM N EDGE, ON ROUND DUCT	A. ND	
B-96004 03-07	CREAM 12"X12" FLOOR TILE (A) AND TAN ADHESIVE (B) - TRAILER #5, AT ENTRANCE TO MEN'S RESTROOM	A. ND B. ND	
B-96004.03-08	GRAY COVE BASE AND TAN ADHESIVE - TRAILER #5, MEN'S RESTROOM, E. WALL	A. ND	
B-96004.03-09	CREAM WALL PANEL ADHESIVE - TRAILER #5, CORRIDOR ADJACENT TO MEN'S RESTROOM, S. WALL, 4.5' ABOVE FLOOR, BEHIND WALL PANEL	A. ND	
B-96004.03-10	MOSAIC 12"X12" FLOOR TILE (A) AND TAN ADHESIVE (B) - TRAILER #8, N. END, 7' FROM E. WALL, 3' FROM N. WALL, UNDER CARPET	A. 10% B. ND	
B-96004.03-11	MOSAIC 12"X12" FLOOR TILE (A) AND BLACK ADHESIVE (B) - TRAILER #10, MIDDLE AREA, 14' FROM S. WALL, AT E. EDGE OF TRAILER JOINT, UNDER CARPET	A. 8% B. ND	

ND = NONE DETECTED

J.A. JONES CONSTRUCTION SERVICES
T690A OFFICE TRAILERS
BULK ASBESTOS SAMPLE INVENTORY

SAMPLE #	DESCRIPTION/LOCATION	ASBESTOS CONTENT	POINT COUNT
B-96004.03-12	BROWN COVE BASE AND CLEAR ADHESIVE - TRAILER #11, MAIN AREA, S. WALL, 4' E. OF M LITTLETON OFFICE DOOR	A. ND	
B-96004.03-13	SMALL MOSAIC PATTERN SHEET VINYL (A) AND GRAY BACKING MATERIAL (B) - TRAILER #13, MEN'S RESTROOM, AT ENTRANCE	A. ND B 70%	
B-96004.03-14	WHITE CEILING TILE - TRAILER #4, 22' FROM S. WALL, BEHIND CEILING DIFFUSER	A. ND	
B-96004 03-15	OFF-WHITE CEILING TILE - TRAILER #1, 8' E. OF SW ENTRANCE	A. ND	
B-96004 03-16	DRYWALL - TRAILER #1, AT ENTRANCE TO SW OFFICE, E. SIDE OF DOOR JAMB	A ND	
B-96004 03-17	WHITE/GOLD MASONITE PANEL - TRAILER #5, JANITOR'S CLOSET, W WALL, 4'FROM ABOVE FLOOR	A. ND	
B-96004.03-18	LT BEIGE WALL PANEL - TRAILER #5, MEN'S RESTROOM, E. WALL, BASE OF N. URINAL	A. ND	
B-96004 03-19	LT GRAY, 1'X1' CEILING TILE (A) AND BROWN (B) ADHESIVE - TRAILER #5, OFFICE JUST S. OF MEN'S ROOM, 3' FROM S. WALL	A. ND B ND	
B-96004.03-20	DRYWALL - TRAILER #8, W. WALL, 7' N. OF W. ENTRANCE	A. ND	
B-96004 03-21	DRYWALL (A) AND JOINT COMPOUND (B) - MIDDLE MAIN ACCESS AREA, 1ST ROOM FROM SOUTH, SE CORNER	A. ND B ND	
B-96004 03-22	DRYWALL (A) AND JOINT COMPOUND (B) - MIDDLE MAIN ACCESS AREA, W WALL, 25' FROM S ENTRANCE	A. ND B. ND	
B-96004 03-23	DRYWALL (A) AND JOINT COMPOUND (B) - MIDDLE MAIN ACCESS AREA, W WALL, 20' FROM N ENTRANCE	A. ND B ND	

ND = NONE DETECTED

J.A. JONES CONSTRUCTION SERVICES
T690A OFFICE TRAILERS
BULK ASBESTOS SAMPLE INVENTORY

SAMPLE #	DESCRIPTION/LOCATION	ASBESTOS CONTENT	POINT COUNT
B-96004 03-24	WHITE CEILING TILE WITH RANDOM GROOVES - TRAILER #9, CONFERENCE ROOM 1, 4' FROM S ENTRANCE	A. ND	
B-96004.03-25	WHITE CEILING TILE WITH ROUGH TEXTURE AND LONGITUDINAL GROOVES - TRAILER #10, MAIN E-W CORRIDOR, 10' FROM E. ENTRANCE	A. ND	
B-96004.03-26	DRYWALL - TRAILER #10, E WALL, 2' FROM NE CORNER	A. ND	
B-96004 03-27	DRYWALL - TRAILER #14, E. WALL, 12' FROM NE CORNER	A ND	
B-96004 03-28	OFF-WHITE ACOUSTIC WALL PANEL - TRAILER #15, N. WALL, 3' FROM NW CORNER	A. ND	
B-96004.03-29	CREAM VAPOR BARRIER MASTIC - CRAWLSPACE BENEATH W. TRAILERS, 20' E. OF N ACCESS, 6' FROM N. SKIRTING, ON PIPE TSI	A. ND	
B-96004 03-30	CREAM VAPOR BARRIER MASTIC - CRAWLSPACE BENEATH W. TRAILERS, 12' E. OF N. ACCESS, 15' FROM N. SKIRTING, ON PIPE TSI	A. ND	
B-96004 03-31	CREAM VAPOR BARRIER MASTIC - CRAWLSPACE BENEATH W. TRAILERS, 15' E. OF N. ACCESS, 8' FROM N. SKIRTING, ON PIPE TSI	A. ND	
B-96004 03-32	CREAM DUCT WRAP - TRAILER #2, ROOF, 6' FROM S. EDGE, ON TOP OF HVAC DUCT	A. ND	
B-96004.03-33	CREAM DUCT WRAP - ROOF, E JUNCTURE OF TRAILER #2 AND #3, 6' FROM S EDGE, BOTTOM OF HVAC DUCT	A. ND	

ND = NONE DETECTED

APPENDIX C

BULK PAINT SAMPLE INVENTORY AND LABORATORY RESULTS

J.A. JONES CONSTRUCTION SERVICES
T690A OFFICE TRAILERS
BULK PAINT SAMPLE INVENTORY

SAMPLE #	DESCRIPTION/LOCATION	LAB RESULT
BL-96004.03-01	YELLOW WOOD - NORTHWEST CORNER ENTRANCE, STEP BALLISTER	0 002 mg/cm2
BL-96004.03-02	WHITE WOOD - NORTHWEST CORNER ENTRANCE, EXTERIOR VESTIBULE, WEST WALL	0 002 mg/cm2
BL-96004 03-03	WHITE METAL - NORTHWEST CORNER ENTRANCE, EXTERIOR DOOR	BDL
BL-96004.03-04	BROWN METAL (OLIVE UNDERCOAT) - SOUTHWEST CORNER ENTRANCE, INTERIOR TRAILER DOOR, DOOR FRAME	BDL
BL-96004.03-05	OFF-WHITE DRYWALL - WEST TRAILER, MAIN AREA, CEILING, 8' FROM WEST WALL, 4' FROM SOUTH WALL	0.011 mg/cm2
BL-96004 03-06	WHITE METAL - MIDDLE ACCESS AREA, NW ENTRANCE DOOR TO WEST TRAILERS	0 151 %
BL-96004.03-07	GRAY METAL - SW MEN'S ROOM, STALL PARTITION PANEL	BDL
BL-96004.03-08	WHITE DRYWALL - SW MEN'S ROOM, CEILING, 1' FROM NORTH WALL, 3' FROM EAST WALL	0 010 mg/cm2
BL-96004 03-09	GRAY WOOD - MIDDLE ACCESS AREA, BASEBOARD OF EAST WALL, 20' FROM SOUTH ENTRANCE	BDL
BL-96004.03-10	RED WOOD - MIDDLE ACCESS AREA, NEAR EAST TRAILER ENTRANCE ON SUPPORT COLUMN	0 017 mg/cm2
BL-96004.03-11	WHITE DRYWALL - MIDDLE ACCESS AREA, WEST WALL, 30' FROM SOUTH ENTRY	BDL
BL-96004 03-12	WHITE WOOD - TRAILER #9, NORTH WALL, 10' FROM SW CORNER	BDL
BL-96004 03-13	WHITE PARTICLE BOARD - TRAILER #9, CEILING, 10' FROM SOUTH WALL, 6' FROM WEST WALL	BDL
BL-96004 03-14	WHITE METAL (OLIVE UNDERCOAT) - TRAILER #11, DOOR TO ROOM 25, WEST OF MEN'S ROOM	BDL
BL-96004 03-15	OFF-WHITE DRYWALL - TRAILER #15, WEST WALL, 20' FROM SOUTH WALL	BDL

BDL = BELOW DETECTION LIMIT

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